DCI/IC 74-083
3 June 1974

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MEMORANDUM FOR: [redacted]

SUBJECT : Some Thoughts on How to Manage Collection System Trade-Offs

1. In theory, and to a considerable extent in practice, the SIGINT, COMIREX, and HUMINT Committees of USIB provide coordinated requirements and collection guidance to NSA, the NRO, and the HUMINT community respectively. What is perceived to be lacking is a community mechanism to coordinate collection between and among these three separate collection systems.

2. The ability of the DCI and program managers to make rational judgments on SIGINT/Imagery/HUMINT trade-offs will depend heavily on a more effective system of evaluation than now exists but which, hopefully, will evolve from KEP. Thus, in my view, whatever mechanism is developed to staff out such judgments should be the same mechanism that makes the key judgments in the KEP process. This points inevitably to the NIOs.

3. What will happen in practice is that each NIO, after an accumulation of experience and knowledge based on the data produced by KEP, will say I need X amount of SIGINT, Y amount of Imagery, and Z amount of HUMINT to meet the needs of my bailiwick. George Carver will add up all the X's, Y's, and Z's and present the totals separately to each appropriate USIB Committee. These will be considered the highest priority, rock bottom requirements for each collection system. The Committee will be responsible for determining what additional requirements will have to be added to meet "other" legitimate needs of customers. This process will require brokering not only with the program managers of three collection systems but also consultation among the three committee chairmen and finally clearance through IRAC and USIB.

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4. It may be argued that the NIOs are not adequately staffed to assume this new function. In my view, it is inextricably bound up with the function they have already been assigned with respect to KEP. And it should take very few, if any, more people to do the former in addition to the latter.

5. The IC Staff, as now constituted, is not equipped to do this job. The essential ingredient, which only the NIOs are possessed of, is the capacity to make substantive judgments on what kinds of collection systems are producing the required types of intelligence to meet our highest priority needs. The IC Staff can, however, provide the resource cost data which will necessarily be required by the NIOs as an input to their substantive judgments.

6. A super-committee, consisting of the chairman of the three cognate committees, would not be in a position to make objective and independent judgments, although this might be a useful staff element under strong NIO guidance and direction as proposed in paragraph 3 above.

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IC Staff

cc: AD/DCI/IC
D/MPRRG/IC

The Intelligence Requirements Process

Introduction

The term "intelligence requirements" is perhaps the most frequently used and also the most frequently misused term in the lexicon of the intelligence community. "Requirements" can cover the spectrum from broad statements of intelligence production needs to the specific information sought in the tasking of an individual collector or technical sensor. In every instance, a stated requirement is used as the basis for creating or operating a collection resource; for processing, analyzing or exploiting the collected data; and for synthesizing, evaluating and reporting single or multiple source information in a product which can range from a spot report to an in-depth study or a national estimate.

The full range of requirements reflect the insatiable appetites of the intelligence consumers, the intelligence managers and the intelligence analysts. Most, if not all, requirements are stated without regard for satisfaction capability, feasibility, complexity or cost. Few, if any, stated requirements are ever fully satisfied; those which may be satisfied usually give rise to further and more detailed statements of need or desire or to regeneration of the requirement for up-dating purposes. Thus, the volume of requirements continues to multiply in proportion to the satisfaction achieved.

Apart from relatively superficial "validation" procedures, no particular effort is made to challenge or reject requirements statements, nor is the originator ever informed of the feasibility, complexity or cost of meeting a stated requirement. In this aspect, the requirements process can be viewed as a huge juggernaut with no brakes and few effective control mechanisms.

Prioritizing or priordering of requirements is another imponderable which detracts from the effectiveness of the process in most instances. The plethora of requirements originators and the wide range of responsibilities they represent adds confusion and conflict to judgments of priority.

Process versus System

So far, I have referred to the requirements "process". It would be preferable to refer to it as the "system". However, a system by definition is "a regularly interacting or interdependent group of items forming a unified whole" with the connotation of an organization serving a common purpose and under specific leadership. Except for small segments of the present process which are systematized, the total process does not appear to meet the "system" criteria. To make the process a system should perhaps be one of our basic objectives.

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Elements of the Process

The requirements process can best be understood when viewed in terms of sequential steps which become separable elements in the process. In broad terms these are:

Objectives or Goals -- general statements, usually reflecting end results; relatively few in number and preferably in some order of priority or emphasis; correspond to what are otherwise described as First Order Requirements. Existing example is DCID 1/2 and corresponding JCS JSOP Annex A.

Statements of Requirements or Information Needs -- Expansion of general objectives into more specific descriptions of information needed to support intelligence analysis and product; not directed at any specific collection, processing or analysis discipline; not in priority order except as derived from general objectives; correspond to Second Order Requirements. Existing examples are Key Intelligence Questions, Defense Intelligence Requirements, Essential Elements of Information (EEI) stated in Unified Command war and contingency plans.

Guidance (to collectors, processors, analysts) -- probably the least-defined element of the process; involves directing requirements or information needs to one or more collection disciplines based on judgment of most likely sources to provide data in timely and useable form; also serves as management mechanism for processors and analysts; determination of essentiality of one collection source over others is part of guidance. Existing examples are SORS mission guidance to Directors, NRO and NSA; COMIREX guidance to NRO, Intelligence Guidance for COMINT Programming (IGCP).

Tasking -- A further detailing of requirements or information need statements into specific tasks to be performed by individual collectors or sensors in consideration of guidance provided; equates to Third Order Requirements in detail of observables, circuits to be covered or targets to be photographed. This element is best carried out by the collection resource manager who can marry the data needs with the technical or access capability of the collector or sensor. Examples are NSA SIGINT system tasking, technical tasking of overhead systems, or specific intelligence tasks levied on HUMINT collectors.

Interrelationships of the Process

In an ideal world, the elements of the process identified above should provide for requirements development to flow in an orderly progression of sequential steps, each detailed statement or action at any level

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being relatable to something at the next higher level. Unfortunately, this does not now occur, and it is difficult if not impossible in many cases to trace tasks, guidance and information needs back to requirements and broad objectives. This is true for two principal reasons:

- many originators of requirements have direct access to collection and processing systems without review by any central authority, and

- there is no central authority or structured mechanism through which requirements can pass for validation, association and the provision of guidance.

For example, the centralization of the SIGINT system over the past several years and the provision by NSA of direct service in place of direct support necessitates all commands making known to NSA their SIGINT requirements. Commanders are afforded the opportunity to originate and state these requirements directly to NSA, keeping DIA informed. But no challenge is offered to the validity or relative priority of such requirements, and there is no procedure whereby they are associated with corresponding or possibly conflicting requirements levied on the SIGINT systems from other sources, either other commands or national (Washington-level) authorities. The total of all requirements thus received by NSA clearly exceeds the resource and technical capability of the SIGINT system to respond in an effective and timely manner. This results in the claim that NSA is failing to fulfill many requirements.

In the imagery collection and exploitation endeavor, the requirement and guidance procedure is much more orderly as the result of a central authority (COMIREX) which receives all requirements, prioritizes them, and provides for collection and processing action in accordance with system capabilities. In a sense, the comparison of the SIGINT system to the imagery system is unfair and unrealistic. Imagery acquisition involves a relatively few systems constrained only by vehicle availability and weather. Success (requirement satisfaction) is a "yes" or "no" proposition. Target denial or target security measures are not significant factors inhibiting collection. SIGINT collection, on the other hand, is a highly complex mixture of human and technical systems operating in a deliberately non-cooperative environment with success attributable to educated technical tasking, tedious monitoring, fortuitousness and technical competence in processing. Few requirements are ever completely satisfied and many exceed even the best of the system capabilities.

It is reasonable to conclude, therefore, that the major problems confronting the intelligence community in requirements management pertain to the SIGINT system.

When is a Requirement not a Requirement?

There is one school of thought in the intelligence community that a stated requirement which exceeds our technical or human capability to satisfy should not be "validated" and levied for collection or processing action. I reject this view. Any requirement for substantive response should be stated and accepted whether or not a capability exists to operate against it. The lack of a current capability could, for example, cause necessary research and development to be undertaken toward creation of a capability. At the same time, we should recognize that some of our most pressing requirements are not likely to ever be satisfied. That fact, however, is not sufficient to deny that the requirement exists.

This brings into play the need for prioritizing and the careful provision of guidance in the application of resources toward requirements satisfaction. The objectives or goals element of the requirements process provides a general priority framework within which second and third order requirements can and should be fit. To do so effectively requires, among other things, that all stated requirements (second order) be reviewed by a central authority who is able to associate and priorder all statements. This having been done, the further provision of guidance incident to conveying the requirements into particular discipline areas can include recommendations on the emphasis of resource application consistent with overall priorities and essentiality of the source. This procedure would recognize that some lower priority requirements would receive no effort in order that appropriate effort is applied to higher priority needs. These determinations should be made by the central authority responsible for providing guidance in each discipline area. Such a procedure is already in effect for the relatively simple imagery discipline and needs to be developed for the SIGINT discipline.

To Make the Process a System

An analysis of the requirements process and its application to the principal disciplines of imagery, SIGINT and HUMINT indicates that the process lacks systematic organizational structure in the first two elements--objectives or goals and requirements or information needs. The statements in both of these elements need to be associated, the second being derivative from and an expansion on the first. Both sets of statements need to be placed in realtive priority order, irrespective of disciplines to be applied. It is suggested that there should be a USIB Requirements Committee established for these purposes.

The application of stated requirements to particular collection and processing disciplines should be accomplished by the respective committees of USIB--COMIREX, SIGINT and HUMINT--in the form of guidance to be

utilized by appropriate program managers in the allocation of resources and the assignment of operational tasking. Obviously, these procedures will take differing forms depending on the detail and nature of guidance to be provided for tasking purposes.

It seems clear that the SIGINT guidance area is the most complex. Past efforts to systematize this area have been hampered by two major shortcomings:

- a lack of detailed knowledge on the part of the SIGINT Committee concerning resources allocated and capabilities existing within the SIGINT system to respond to requirements and guidance;

- a lack of centralized access to all requirements levied on the SIGINT systems by various originators.

There is evidence that the new SIGINT Requirements Management System (SIRE) being developed by NSA, if shared with the intelligence community and the SIGINT Committee, could go a long way toward alleviating the first problem area. The nature and degree of assistance to be derived from SIRE needs to be negotiated with NSA and developed for community application. There appears to be a willingness to do this.

The "other requirements" problem is a USIB and SIGINT Committee matter involving all members, but particularly the DIA, Military Service and Treasury members. While substantial progress can be made on this problem within the SIGINT Committee, an even more effective system could evolve with the assistance of a USIB Requirements Committee.

Recommendations

It is recommended that:

- serious consideration be given to forming a USIB Requirements Committee to fulfill the functions discussed above;

- the SIGINT Committee Ad Hoc Review Group give particular attention to a Committee structure or sub-structure which will move toward more effective systematization of requirements for which SIGINT is judged to be an essential source, the priordering of these requirements, and the provision of guidance to the SIGINT program manager.

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Addendum

There is an obvious interface necessary between action recommended for the SIGINT Committee and the National SIGINT Plan under development by Director, NSA. Requirements for which SIGINT contributions are essential, resources allocated, system capabilities and an assessment of responsiveness and satisfaction are all ingredients to be considered in the Plan.

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